

# Weekly Report 2016.10.10-2016.10.16

## Progress:

### 1. Huawei Project

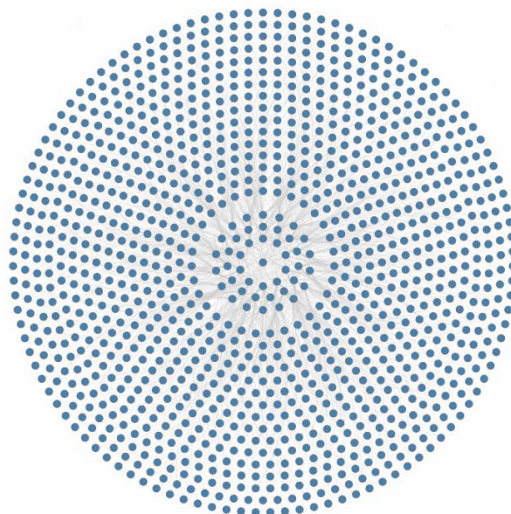
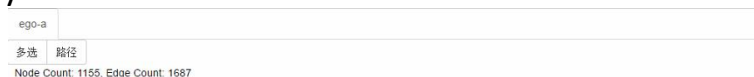
This week we finished most tasks and refined the interface according to Zhang Wei's design.

Now, the interface is:

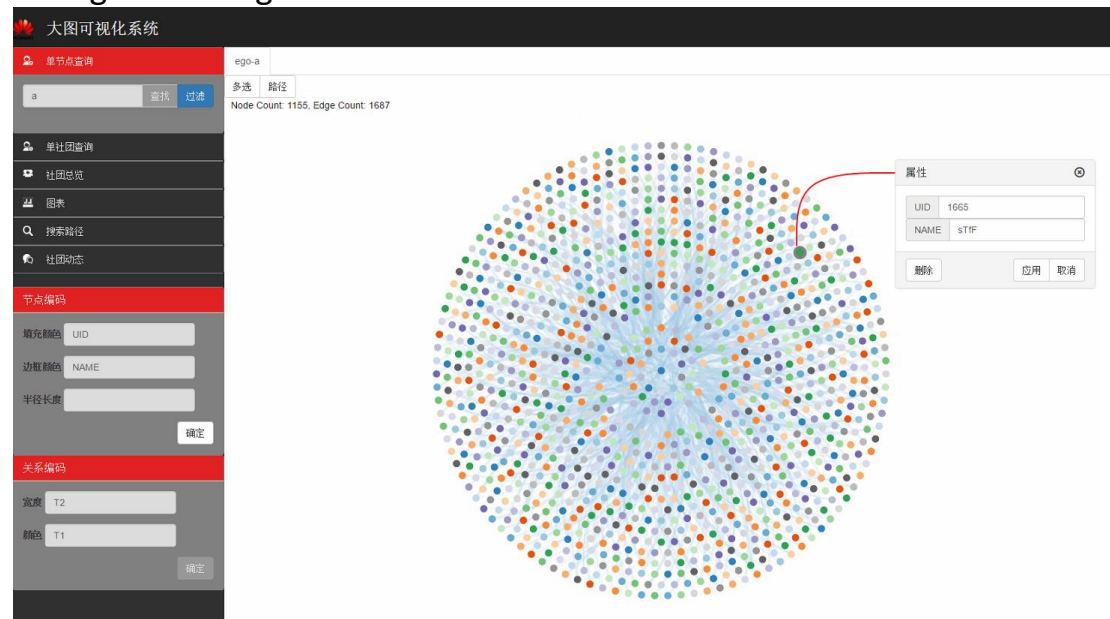


Single query, multiple query, and path query use the same interactions, the only difference is layout.

Single query:

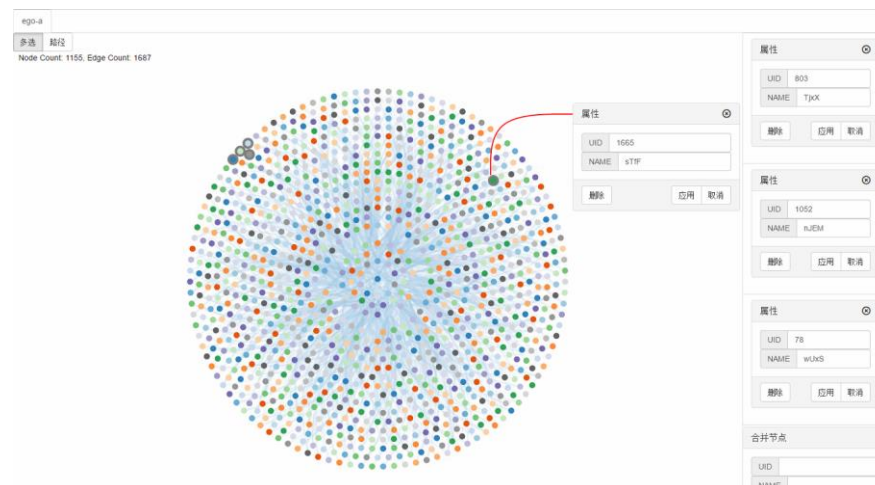


## Change encodings and check attributes:

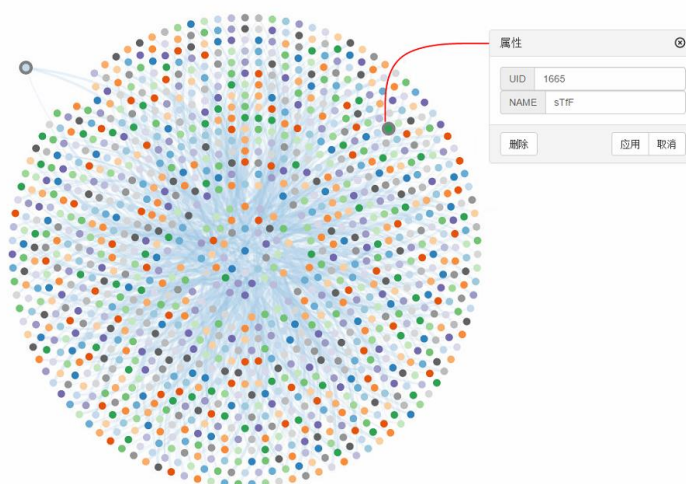


## Merge nodes:

### Before:



### After:



## Multi query:



## Path query:



Visualizations of communities, including single community, overview, and dynamics of communities, are also finished. The whole project now is integrated as one on Dongming's PC.

## 2. Temporal Ensemble Rankings

I start to revise this paper immediately.

### **3. TCPTree**

We finished this project and submit to PacificVis 2017.

### **4. Papers**

#### **1) Deep learning for computational biology**

This paper reviewed the application of deep learning in computational biology, especially in regulatory genomics and cellular imaging. In regulatory genomics, a DNA sequence is encoded as binary vectors, i.e., A= (1,0,0,0), G= (0,1,0,0), T= (0,0,1,0), C= (0,0,0,1). A DNA sequence is actually transformed to a  $4 \times N$  matrix. I think this is similar to the adjacent matrix of a network. I need to find more papers about the application of deep learning in finding patterns in DNA sequences.

As for cellular imaging, the techniques are quite normal, just use a series of cell images as input.

### **Plan:**

#### **1. Huawei Project**

Write the patent and go to Huawei for final check.

#### **2. Temporal Ensemble Ranking Data**

Talk with Prof. Wu, and revise the paper as soon as possible.

#### **3. Make the poster for vis**